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DATE MAILED: 07/09/2009

NOTICE OF ALLOWANCE AND FEE(S) DUE

38834 7590 07/09/2009 WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP

WESTERMAN, HATTORI, DANIELS & ADRIAN, LL 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON DC 20036

| EXAMINER | | | | | | |
|-----------------|--------------|--|--|--|--|--|
| QUINTO, KEVIN V | | | | | | |
| ART UNIT | PAPER NUMBER | | | | | |
| 2826 | | | | | | |

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. | | | |
|---|-------------|----------------------|---------------------|------------------|--|--|--|
| 10/587,363 | 07/27/2006 | Kenji Yoneda | 062711 | 6682 | | | |
| TITLE OF INVENTION: LED AND ATTACHMENT STRUCTURE OF LED | | | | | | | |

| APPLN. TYPE | SMALL ENTITY | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|----------------|--------------|---------------|---------------------|----------------------|------------------|------------|
| nonprovisional | NO | \$1510 | \$300 | \$0 | \$1810 | 10/09/2009 |

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 1SI. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FIEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

or Fax (571)-273-2885

| INSTRUCTIONS: This appropriate. All further indicated unless correcte maintenance fee notificat | form should be used I correspondence including d below or directed off ions | or transmittin ig the Patent, ierwise in Blo | g the ISSI advance o ock 1, by (| JE FEE and PUBLI rders and notification a) specifying a new of | CATI n of n corres | ON FEE (if requirements of the contract of the | red). B ill be i and/or | locks 1 through 5 st nailed to the current (b) indicating a sepa | iould be correspo rate "FEI | completed where ndence address as E ADDRESS" for |
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| 1250 CONNECT SUITE 700 | 7590 07/06 I, HATTORI, DA FICUT AVENUE, I | NIELS & | ADRIA | N, LLP | I bei | Cert | ificate | of Mailing or Trans) Transmittal is being ficient postage for firs ISSUE FEE address () 273-2885, on the d | denovite | d with the United ail in an envelope r being facsimile ted below. |
| WASHINGTON | , DC 20036 | | | | | | | | | (Depositor's name) |
| | | | | | | | | | | (Signature) |
| | | | | | $ldsymbol{\sqcup}$ | | | | | (Date) |
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| EXAM | INER | ART U | NIT | CLASS-SUBCLAS | s | | | | | |
| QUINTO, | | 282 | | 257-079000 | | • | | | | |
| "Fee Address" indi PTO/SB/47; Rev 03-0 Number is required. 3. ASSIGNEE NAME A | ondence address (or Cha //122) attached. cation (or "Fee Address 2 or more recent) attach ND RESIDENCE DAT. ess an assignee is ident n in 37 CFR 3.11. Comp | nge of Corresp Indication found. Use of a C | oondence orm Customer | or agents OR, alte (2) the name of a registered attorne 2 registered paten listed, no name w THE PATENT (print | single y or a st attor ill be or typ the pa | e firm (having as a agent) and the name meys or agents. If r printed. ee) atent. If an assigne assignment. | members of up no nam | er a 2 | | has been filed for |
| Please check the appropri | | categories (w | | | | | _ | on or other private gro | | |
| 4a. The following fee(s) a Issue Fee Publication Fee (N Advance Order - # | o small entity discount j | permitted) | - 4 | b. Payment of Fee(s): A check is enclo Payment by cred The Director is h overpayment, to | sed. lit can iereby | d. Form PTO-2038 | is atta | ched. equired fee(s), any de | ficiency. | |
| | SMALL ENTITY state | is. See 37 CFF | | | | | | TTY status. Sec 37 Cl | | |
| NOTE: The Issue Fee and interest as shown by the r | I Publication Fee (if req ecords of the United Sta | uired) will not tes Patent and | be accepte Trademark | d from anyone other i Office. | than t | he applicant; a regis | stered a | ttorney or agent; or th | e assigne | e or other party in |
| Authorized Signature | | | | | | Date | | | | |
| Typed or printed name | | | | | | Registration N | | | | |
| This collection of inform an application. Confident submitting the completed this form and/or suggesti Box 1450, Alexandria, V Alexandria, Virginia 223 | ation is required by 37 C iality is governed by 35 application form to the ons for reducing this bu irginia 22313-1450. DO 13-1450. | FR 1.311. The U.S.C. 122 at USPTO. Tim rden, should b O NOT SEND | e information 37 CFR are will vary e sent to the FEES OR | on is required to obtai 1.14. This collection of depending upon the e Chief Information (COMPLETED FORM | in or r is est indiv Office AS TO | etain a benefit by the imated to take 12 n idual case. Any con r, U.S. Patent and D'THIS ADDRESS. | ne publ ninutes mment: Fradem . SENI | to which is to file (and to complete, including s on the amount of tit ark Office, U.S. Depa of TO: Commissioner | by the U g gatheri ne you re artment of or Patent | SPTO to process) ng, preparing, and quire to complete f Commerce, P.O. is, P.O. Box 1450, |

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| 38834 75 | 590 07/09/2009 | EXAMINER | | | | | |
| WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP | | | QUINTO, KEVIN V | | | | |
| | CUT AVENUE, NW | ART UNIT PAPER NUMBI | | | | | |
| SUITE 700 WASHINGTON, I | DC 20036 | 2826 DATE MAILED: 07/09/2009 | | | | | |

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 20 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 20 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Application No. Applicant(s) 10/587,363 YONEDA ET AL. Notice of Allowability Examiner Art Unit 2826 Kevin Quinto -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308. This communication is responsive to 9 April 2009. The allowed claim(s) is/are 12 and 14-19. 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) X All b) ☐ Some* c) ☐ None of the: 1. T Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. \(\overline{\text{Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)). * Certified copies not received: _____. Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient. CORRECTED DRAWINGS (as "replacement sheets") must be submitted. (a) Including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached 1) hereto or 2) to Paper No./Mail Date (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d). 6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL. Attachment(s) 1. | Notice of References Cited (PTO-892) 5. Notice of Informal Patent Application Notice of Draftperson's Patent Drawing Review (PTO-948) Interview Summary (PTO-413), Paper No./Mail Date Information Disclosure Statements (PTO/SB/08). 7. Examiner's Amendment/Comment Paper No./Mail Date 4. T Examiner's Comment Regarding Requirement for Deposit 8. X Examiner's Statement of Reasons for Allowance of Biological Material 9. ☐ Other .

Application/Control Number: 10/587,363 Page 2

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DETAILED ACTION

Allowable Subject Matter

 Claims 15, 16, 18, and 19 are allowed. Claims 12, 14, and 17 were allowed in a previous Office action.

- 2. The following is an examiner's statement of reasons for allowance: the examiner is unaware of any prior art which suggests or renders obvious an attachment structure for an LED which has an anode, a cathode, and a pedestal such that anode and cathode connections are provided within a housing to wiring patterns on a substrate while also having a lead end which is thermally connected directly to a heat radiating member or a cooling member on the rear surface of the substrate or indirectly through a heat radiating or a cooling pattern which is independent of the wiring pattern on the substrate as suggested in claim 15. In addition, the remarks concerning the differences between the claimed subject matter ("lead end," "cathode," and "anode") and the Tokuji reference (JP 2003-188418) in the response filed on April 9, 2009 have been found to be persuasive.
- 3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit: 2826

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quinto whose telephone number is (571) 272-1920. The examiner can normally be reached on M-F 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sue Purvis can be reached on (571) 272-1236. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin Quinto/ Examiner, Art Unit 2826

/Sue A. Purvis/ Supervisory Patent Examiner, Art Unit 2826